

Michele Zilioli

A new stag-beetle of the genus *Lucanus* Scop.
from the Chinese Province of Shaanxi
(Coleoptera Lucanidae)

Abstract - The new species *Lucanus hildegardae* is described: it belongs to the *L. fortunei*-group and is related to *L. szetschuanicus*, from which it differs through the overall shape of mandibles, which are stronger at the base, through the absence of the clypeal ridge, the rounded cephalic ridges and the more elongated shape of aedeagus.

Key words: Lucanidae, *Lucanus*, new species, China.

Riassunto - Un nuovo cervo volante del genere *Lucanus*, proveniente dalla provincia cinese dello Shaanxi (Coleoptera Lucanidae).

La nuova specie *Lucanus hildegardae*, qui descritta, appartiene al gruppo di *Lucanus fortunei* ed è vicina a *Lucanus szetschuanicus* dal quale differisce per la forma generale delle mandibole, per l'assenza di cresta clipeale, per le creste cefaliche arrotondate e per l'edeago più allungato.

Parole chiave: Lucanidae, *Lucanus*, nuova specie, Cina.

Among the material of the genus *Lucanus* coming from the Chinese Province of Shaanxi, that I received for determination from my colleagues A. Kirchner and G. Pross, I identified an interesting new species close to *Lucanus szetschuanicus* Hanus, 1932 and belonging to the group of *Lucanus fortunei* Saunders, 1854. This new species is here figured and described as *Lucanus hildegardae*.

Lucanus hildegardae n. sp.

Holotype. Male: China, Shaanxi, Dinling, 600 m, IV-2002. Deposited in the collection of the Museo Civico di Storia Naturale di Milano, Italy (MSNM).

Paratypes. 18 males: same data as the holotype, deposited in the following private collection: G. Pross, Esslingen, Germany (7 males); A. Kirchner, Reichertshofen, Germany (5 males) and in the author's collection (6 males).

Size (data of the holotype are reported between parentheses): length, including mandibles: 36.0-52.6 mm (50.2 mm).

Length, without mandibles: 27-36.7 mm (35.1 mm); maximum head width, excluding mandibles: 8.8-15.7 mm (14.7 mm).

Description (Holotype). Body slender, blackish brown; elytra dark reddish brown with suture and lateral margins black. Legs reddish brown with tarsi and coxae blackish; femora with base, apex, dorsal and ventral edges black; tibiae dark reddish brown, middle and hind tibiae with dorsal and ventral edges black.

Head transverse (Width/Length: 1.8-1.95), irregularly and finely punctured throughout, matt and covered with short and sparse yellowish appressed pubescence. Frons trapezoidal, fused with the epistoma; clypeal ridge absent; epistoma somewhat triangular with straight sides, anterior apex widely rounded. Frontal ridge bisinuate, raised and protruding medially; lateral ridges strongly sinuate behind the anterior angles, with widely rounded and dilated posterior angles. Anterior angles barely projecting laterally beyond the level of prominent eyes, with strongly punctured canthus penetrating less than half the diameter of the eye. Mandibles slender, proximally and distally curved, rather straight medially, deeply punctured throughout; their upper surface covered proximally with a very fine and sparse yellowish pubescence; apex with a sharp marginal carina on the

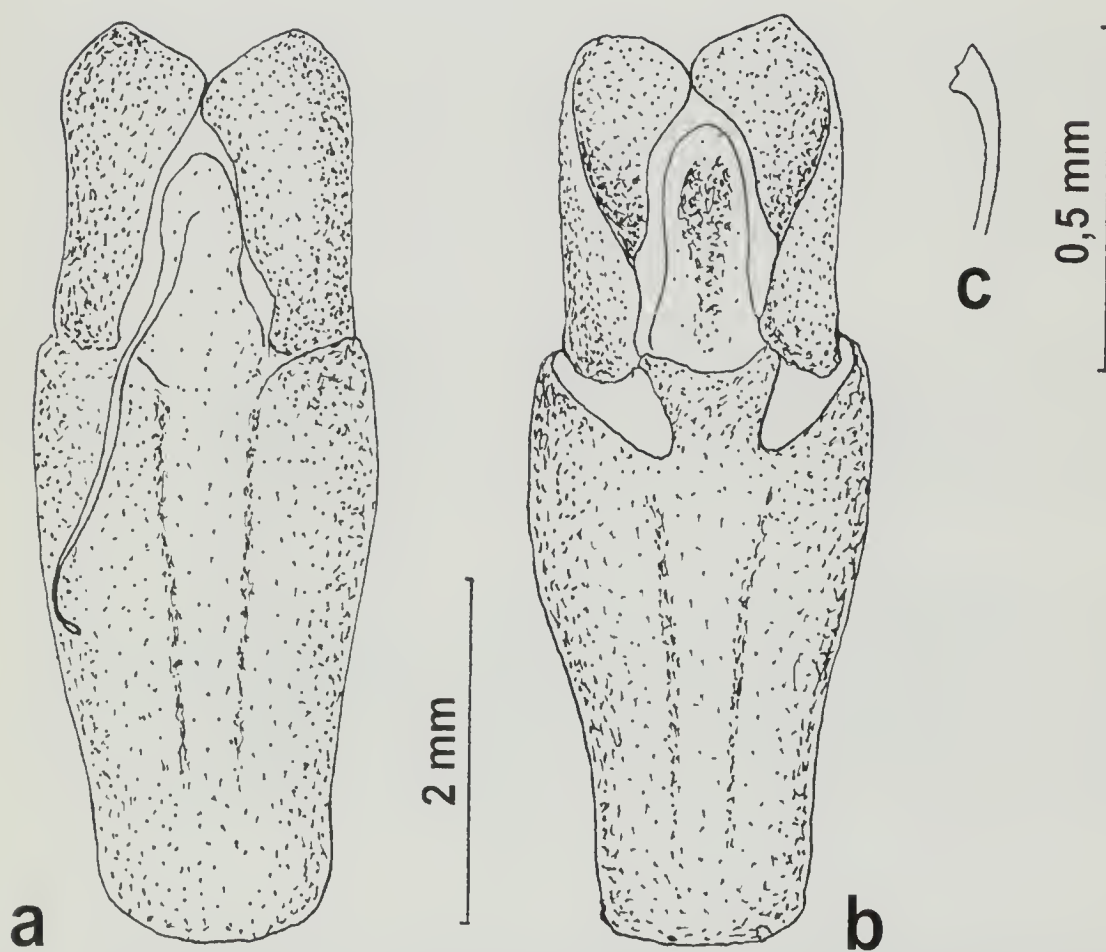


Fig. 1 – *Lucanus hildegardae* n. sp. Aedeagus: a) dorsal view; b) ventral view; c) apex of flagellum.
Fig. 1 – *Lucanus hildegardae* n. sp. Aedeagus: a) visione dorsale; b) visione ventrale; c) apice del flagello.

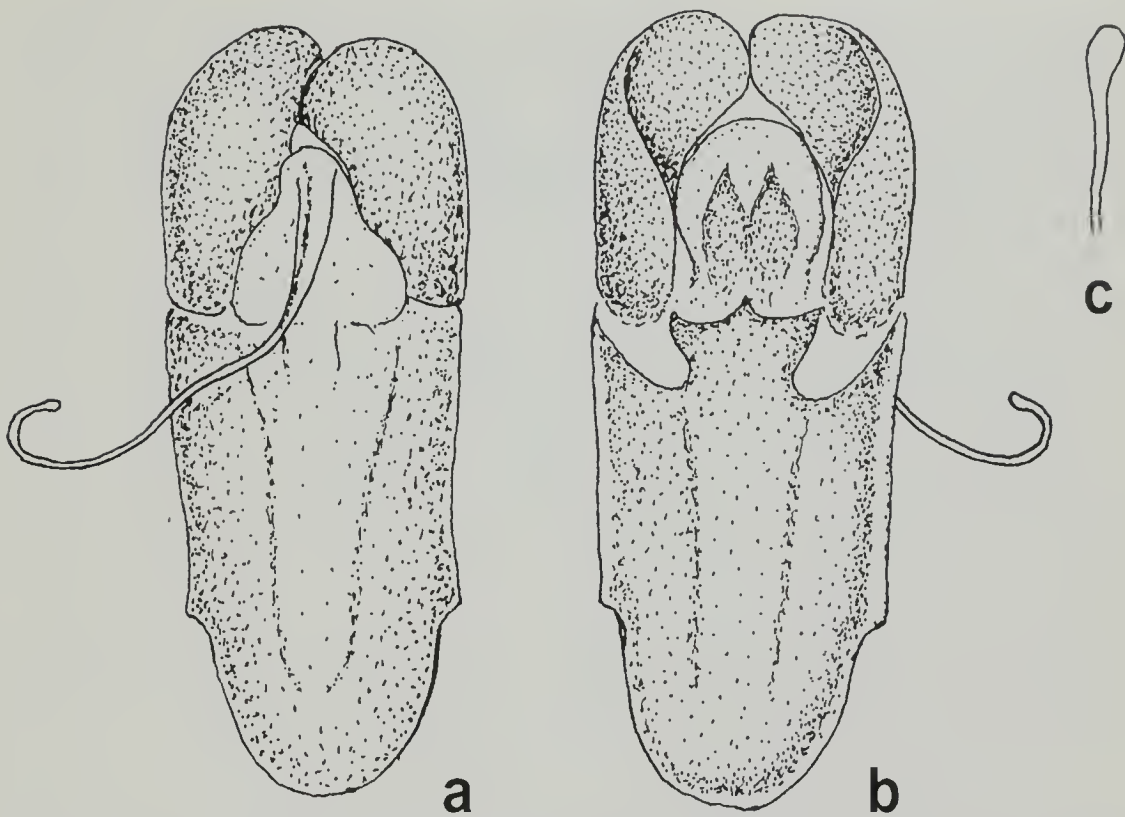


Fig. 2 – *Lucanus szetschuanicus* Hanus, 1932. Aedeagus: a) dorsal view; b) ventral view; c) apex of flagellum.

Fig. 2 – *Lucanus szetschuanicus* Hanus, 1932. Aedeagus: a) visione dorsale; b) visione ventrale; c) apice del flagello.



Fig. 3-4 – 3) *Lucanus hildegardae* n. sp., holotypus; 4) *Lucanus szetschuanicus* Hanus, 1932.

upper surface. Median tooth strong, triangular, sharp, placed slightly beyond the mid-length and feebly bent upwards. The inner margin of the mandible with 4-6 proximal small denticles, never reaching the median tooth, and with 3-4 ones in the distal portion. Upper apical tooth slightly bent upwards, longer than the lower one. Inferior tooth of the mandibular base strong and pointed. Mentum large, trapezoidal, with finely granulose surface, covered with sparse yellowish hairs. Antennal club formed by joints 7-10.

Prothorax transverse (W/L: 1.53-1.73), finely and uniformly punctured, slightly shining, with a feebly impressed, longitudinal, medial depression; posterior angles feebly protruding. Prosternum feebly prominent and widely rounded. Scutellum transverse, subtriangular, rounded, slightly pointed posteriorly; deeply punctured and covered with long yellowish hairs throughout, its narrow lateral margins smooth. Elytron slender, finely and densely punctured and very superficially microreticulated, mostly shining and glabrous; its narrow lateral margin is covered with sparse and fine yellowish hairs; shoulder distinctly toothed.

Legs slender; fore tibiae irregularly toothed on its external edge, middle tibiae with three preapical spines, hind tibiae with two small and feebly produced preapical spines. Aedeagus (Fig. 1), with a short flagellum, which is triangularly widened at its apex. Middle lobe slender, shorter than parameres.

Paratypes. Consistent with the holotype's description. Some specimens have partially fused basal denticles, which may vary in number between 2 and 6. Distal denticles varying between 1 and 3.

Female. Unknown.

Derivatio nominis. This species is dedicated to Mrs. Hildegard Kirchner, the wife of my colleague A. Kirchner, who sent me many interesting species of *Lucanus*.

Remarks

This species is closely related to *L. szetschuanicus* and both species belong to the group of *L. fortunei*. *L. hildegardae* n. sp. differs from *L. szetschuanicus* especially through the shape of the mandibles, which are stronger and less curved at the base, and with denticles of the inner margin present only in the proximal portion and never reaching, even in smallest specimens, the median tooth; the clypeal ridge is absent and the lateral ridges of the head have widely rounded posterior angles, instead of subangular ones as in *L. szetschuanicus*. The aedeagus is more slender with longer middle lobe and parameres, and triangularly enlarged apex of the flagellum.

Acknowledgements

I want to thank especially my colleagues Andreas Kirchner (Reichertshofen, Germany) and Gerhard Pross (Esslingen, Germany), who entrusted me with the study of their interesting material. Also, I am very grateful to Carlo Pesarini (MSNM) for his help and for the drawings of genitalia. Last, but not least, important contributions to this work have been given by my friends: Luca Sessa (Buguggiate, Italy), for his excellent photographs, Noela Ballerio (Brunello, Italy) and Fabrizio Rigato (MSNM) for critical reading of the manuscript.

References

- Hanus F., 1932 - *Lucanus szetschuanicus* n. sp. *Ent. Nachr. Bl.*, Troppau, 6 (4): 101-102.
- Saunders W. W., 1854 - Character of undescribed Lucanidae, collected in China by R. Fortune Esq. *Trans. ent. Soc.*, London (N.S.), 3: 45-55.

Ricevuto: 13 maggio 2002

Approvato: 28 maggio 2002